REMARKS

The Examiner's indication that all items listed on Forms PTO-1449 of the Information Disclosure Statements filed to date have been considered is acknowledged and much appreciated. The Examiner's indication that all but two items listed on a Form PTO-892 of one of the Information Disclosure Statements (a copy from the parent case) filed to date have been considered is acknowledged and much appreciated. Enclosed is a courtesy Form PTO-1449 that lists those remaining two items. The Examiner's indication that these two items have been considered is respectfully requested.

The specification has been amended merely to reflect the status of the parent application and to make minor cosmetic changes. No new matter has been added by virtue of this amendment. Withdrawal of the objection to the specification, based on an alleged informality as to the identification of the status of the parent application, is respectfully requested.

Former Claims 1-19, 21-23, 26-36, 38-44, 49 and 51-97 have been cancelled and new Claims 98-196 have been added. No new matter has been added by virtue of the amendment to the claims.

New independent Claim 98 is similar to Claim 1, as originally filed, with the exception of the recitation of the catalyst as comprising a source of an ion of a metal, the recitation of a physical connection between the catalyst and at least a portion of the abrasive particle, the removal of some terminology, and some rewording of the claim. New Claims 99-107, 108, 109-117, 119, 120, 124, 125-126, 132-139, 140 and 141, more or less correspond to former Claims 2-10, 55, 11-19, 21, 22, 56, 26-28, 29-36, 38 and 39, respectively, with the exception of depending variously from new Claim 98, and being worded consistently with the terminology used in the claim from which they respectively depend. New Claims 118, 121-123 and 128-131, which depend variously from new Claim 98, have no direct correspondence to any former claims. New independent Claim 142 has no direct correspondence to any former claim.

New Claim 143 more or less corresponds to former Claim 40, with the exception of depending from claim 98 or claim 142, described above, and differing accordingly. New Claim 144 more or less corresponds to former Claim 41, with the exception of depending from new Claim 143, and being worded consistently with the terminology used in that claim. New Claims 145-152 more or less correspond to former claims 42-44, 49 and 51-54,

respectively, with the exception of depending variously from new Claim 143, described above, and differing accordingly.

New independent Claim 153 is similar to former claim 57, with the exception of the recitation of the catalyst as comprising a material selected from a group consisting of a metal acetate, a metal nitrate, a metal halide, a metal perchlorate, and any combination thereof, the metal being selected from a group consisting of copper, nickel, iron, silver, and any combination thereof, and the addition of the conjunction, "and". New independent Claim 154 is similar to former claim 58, with the exception of the recitation of the catalyst as comprising a material selected from a group consisting of an iron acetate, an iron nitrate, an iron halide, an iron perchlorate, a copper acetate, a copper nitrate, a copper halide, a copper perchlorate, a nickel acetate, a nickel nitrate, a nickel halide, a nickel perchlorate, and any combination thereof, and the addition of the conjunction, "and". New independent Claim 155 is similar to former claim 60, with the exception of the recitation of the catalyst as comprising a source of an ion of a metal, wherein the metal is selected from a group consisting of copper, nickel, iron, silver, and any combination thereof, the recitation of the catalyst and the oxidizing agent as being capable of interacting to generate free radicals, and the addition of the conjunction, "and".

New Claims 156-169, 174-178, 179-183 and 184-196, more or less correspond to former Claims 61-74, 79-84, 75-78 and 85-97, respectively, with the exception of depending variously from one or more of new Claims 153-155, described above, and differing accordingly. New Claims 170-173, which depend variously from two or more of new Claims 153-154, have no direct correspondence to any former claims.

Former Claims 1-19, 21-23, 26-36, 38-44, 49 and 51-97 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting, as allegedly being unpatentable over Claims 1-63 of co-pending Application No. 10/393,542. These provisional rejections are moot, as these former claims have been cancelled herein.

Former Claims 1-19, 21-23, 26-36, 38-44, 49 and 51-97 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting, as allegedly being unpatentable over Claims 1-74 of co-pending Application No. 10/361,822. These provisional rejections are moot, as these former claims have been cancelled herein.

Former Claims 1-19, 21-23, 26-36, 38-44, 49 and 51-97 were rejected under 35 U.S.C. 103(a), as allegedly being unpatentable over by U.S. Patent No. 6,435,947 of Mueller *et al.* (hereinafter, "Mueller") in view of U.S. Patent No. 5,302,356 of Shadman *et al.* (hereinafter,

"Shadman") and U.S. Patent No. 6,468,428 of Nishii *et al.* (hereinafter, "Nishii"), and further in view of U.S. Patent Application Publication No. US 2002/0017063 of Beitel *et al.* (hereinafter, "Beitel"), U.S. Patent No. 6,461,227 of Fang (hereinafter, "Fang") and U.S. Patent No. 6,375,545 of Yano *et al.* (hereinafter, "Yano"). (It is assumed that the Mueller *et al.* reference relied upon by the Examiner is U.S. Patent No. 6,435,947 of Mueller *et al.*, and not the other Mueller *et al.* reference of record, based on the Examiner's description of particular portions of the Mueller *et al.* reference that do not match up with the latter reference.) These rejections are moot in view of the cancellation of these former claims.

It is submitted that new Claims 98-196 are patentable over Mueller in view of Shadman and Nishii, and further in view of Beital, Fang and Yano, for at least the reasons set forth below.

Mueller teaches a slurry composition that has various components, including an oxidizing agent, an abrasive, and a solid catalyst that may be supported on the abrasive. (See, for example, Mueller: col.4, ll.21-30; and col.6, ll.18-19.) According to Mueller, solid catalysts that are useful in the compositions of the Mueller invention are those that are characterized by having their electrons excited to a conducting band when they are photoelectrically stimulated. (See Mueller: col.7, ll.1-4.) Every description and example of such solid catalysts that are useful in the Mueller invention concerns heterogeneous metal oxide catalysts that are capable of having their catalytic activity enhanced by activation with an energy source, such as specific semiconducting metal oxides ("M_xO_y wherein M is selected from Ti, Ta, W, V, Nb, Mn, Zr, and mixtures thereof, ..."), and amongst those, preferably titanium oxides or forms of titania. (See, for example, Mueller: col.3, ll.4-19; col.7, ll.4-15 and 26; cols.14-15, Examples 1-3.) These heterogeneous solid catalysts are essentially insoluble in the liquid phase of the composition. (See Mueller: col.5, ll.44-48.)

There is no teaching or suggestion in Mueller that the insoluble solid catalysts useful in Mueller's slurry compositions encompass a catalyst as recited in each of the pending Claims 98-196. Merely by way of example, Mueller provides no teaching or suggestion that such solid catalysts, which are characterized by having their electrons excited to a conducting band when they are photoelectrically stimulated, encompass a catalyst comprising a source of an ion of a metal, as variously recited as an element in the composition of Claims 98, 142, 155, and the claims depending respectively therefrom, or a catalyst comprising a material selected from a group consisting of various group members, as variously recited as an element in the composition of Claims 153, 154, and the claims depending respectively therefrom. It is

respectfully submitted that one of ordinary skill in the art would not have read Mueller as providing any such teaching or suggestion. Further by way of example, Mueller provides no teaching or suggestion of that such solid catalysts, which are characterized by having their electrons excited to a conducting band when they are photoelectrically stimulated, encompass a catalyst, wherein a metal thereof is as variously recited in the composition of Claims 98, 142, 153, 154, 155, and the claims depending respectively therefrom. The Examiner has not shown otherwise.

Apart from Mueller's insoluble solid catalysts, which have energy-excitable electrons, as described above, Mueller teaches a different set of soluble catalysts, which serve as electron-transfer agents. (See Mueller: col.9, ll.21-25.) These soluble catalysts must be able to shuffle electrons efficiently and rapidly between the oxidizer of the composition and the metal substrate surface. (See Mueller: col.9, ll.27-29.) As soluble catalysts, these catalysts are dissociable in the composition, unlike Mueller's insoluble solid catalysts, which may be supported on the abrasive. Mueller teaches the two types of catalysts as being distinct, not interchangeable. There is no teaching or suggestion in Mueller otherwise. It is respectfully submitted that from this teaching of distinct catalysts in Mueller, one of ordinary skill in the art would not have read Mueller as teaching or suggesting that its insoluble solid catalysts encompass a broad range of unnamed catalysts, including a host of unknown possibilities, based on its disclosure of "non-limiting examples" of insoluble solid catalysts, as appears to be the position of the Examiner. (Office Action, page 3.)

The Examiner appears to be looking to Shadman and Nishii, *inter alia*, to remedy the above-mentioned deficiencies of Mueller. However, none of the five references of the alleged combination put forth by the Examiner, including Shadman and Nishii, remedy the above-mentioned deficiencies of Mueller as to pending Claims 98-196, as further remarked upon below. As such, even if the alleged combination of Mueller in view of Shadman and Nishii, and further in view of Beital, Fang, and Yano were somehow possible, *arguendo*, any rejection of pending Claims 98-196 could not stand.

As to Shadman and Nishii, they represent non-analogous art, as remarked upon below, and thus, have no bearing on the patentability of pending Claims 98-196. Shadman represents non-analogous art, as Shadman's teaching does not pertain to the field of Applicants' endeavor and is not reasonably pertinent to the particular problem with which Applicants were involved. See *Wang Laboratories Inc. v. Toshiba Corp.*, 993 F.2d 858, 26 USPQ2d 1767, 1773 (Fed. Cir. 1993) (Reference not in same field of endeavor as the claimed invention

merely because both relate to memories and not reasonably pertinent to particular problem (small size) with which Applicants were involved, and thus, held to be non-analogous.). Shadman concerns ultrapurification of water, which does not pertain to the field of Applicants' endeavor in the area of chemical-mechanical polishing. The purpose of Shadman is to provide a water treatment system for removing ppb levels of organic contaminants from water while avoiding problems associated with exposure of polymeric parts to UV radiation (see column 1, lines 54-62). This is vastly different from Applicants' purpose of providing compositions and methods for chemical-mechanical polishing. The Examiner has not shown otherwise. Further, Shadman's teaching of a water treatment system to remove organic contaminants from water while avoiding UV radiation-related problems is not reasonably pertinent to the problem with which Applicants were involved, that of further developing chemical-mechanical polishing technology. The Examiner has not shown otherwise. As non-analogous art, Shadman has no bearing on the patentability of Claims 98-196.

Nishii also represents non-analogous art, as Nishii's teaching does not pertain to the field of Applicants' endeavor and is not reasonably pertinent to the particular problem with which Applicants were involved. See *Wang Laboratories Inc. v. Toshiba Corp.*, 993 F.2d 858, 26 USPQ2d 1767, 1773 (Fed. Cir. 1993) (As commented on above.) Nishii concerns a filter device, such as that used in water treatment and environmental purifying, in which a glass material for carrying a photocatalyst is used. The purpose of Nishii is to provide a filter that incorporates a photocatalyst carrier that allows light to be guided to the photocatalyst to thereby activate the photocatalyst for greater filter efficiency and efficacy. (See, for example, Nishii: col.1, ll.11-22; col.3, ll.8-12; and col.5, ll.9-13.) This is vastly different from Applicants' purpose of providing compositions and methods for chemical-mechanical polishing. The Examiner has not shown otherwise. Further, Nishii's teaching of a filter system that incorporates a light-guiding device to improve filter performance is not reasonably pertinent to the problem with which Applicants were involved, that of further developing chemical-mechanical polishing technology. The Examiner has not shown otherwise. As non-analogous art, Nishii has no bearing on the patentability of Claims 98-196.

Even if Shadman and Nishii were somehow considered applicable, *arguendo*, they are not capable of combination with Mueller and Beital, Fang and Yano. That is, one of ordinary skill in the art at the time of the present invention simply would not have looked to Shadman's teaching concerning water ultrapurification and Nishii's teaching concerning a filter device for a material suitable for any of Mueller, Beital, Fang, and Yano's polishing formulations.

As to the photocatalyst(s) of Shadman and Nishii, it is respectfully submitted that a catalyst for one reaction, or useful in a particular composition or application, is not *per se* a catalyst for a completely different reaction, or useful in a completely different composition or application, nor would it have been understood as such by one of ordinary skill in the art at the time of the invention. There is simply no teaching or suggestion that supports the combination of the disparate Mueller, Shadman and Nishii, and the Beital, Fang, and Yano references. The Examiner has not demonstrated otherwise.

Further, even if Shadman and Nishii were somehow considered applicable, *arguendo*, and somehow considered capable of combination with Mueller and Beital, Fang and Yano, *arguendo*, one of ordinary skill in the art would not have arrived at the invention of Claims 98-196 from any such combination. Shadman fails to teach or suggest that its copper oxide catalyst in its water ultrapurification system encompasses a catalyst comprising a source of an ion of a metal, as variously recited as an element in the composition of Claims 98, 142, 155, and the claims depending respectively therefrom, or a catalyst comprising a material selected from a group consisting of various group members, as variously recited as an element in the composition of Claims 153, 154, and the claims depending respectively therefrom. Nishii similarly fails as to its iron oxide catalyst in its filter device. Each of Shadman and Nishii thus fail to remedy the above-mentioned deficiencies of Mueller.

As to Beital, Fang, and Yano, each fails to remedy the deficiencies of Mueller by failing to teach or suggest a composition that comprises a combination of elements that includes a catalyst as recited in each of Claims 98-196. The Examiner has not contended otherwise, relying on Beital and Fang only for respective teachings of various oxidizing agents, and on Yano only for teaching of various abrasive particles. (See Office Action, pages 3 and 4.)

As to the Examiner's reliance on *In re Kerkorhoven*, is respectfully submitted that same is not sufficiently clear (i.e., not applied to any particular claims, not explained sufficiently, not clear as to a reference to "form[ing] a third material" and how that might relate to any particular claims, etc.) to be addressed. (See Office Action, page 4.) As to the Examiner's reliance on *Ex parte George*, *In re Woodruff*, *Merk & Co. v. Biocraft Lab. Inc.*, and *In re Susi*, the introductory text provided in connection with same is not sufficiently clear (i.e., Mueller contains no claims to a substrate, the text "substrate in a similar the polishing method..." is not understood, etc.) to be addressed. (See Office Action, page 5.)

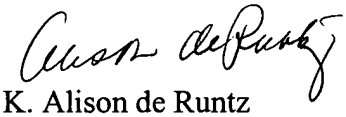
It is respectfully submitted that the alleged combination of Mueller, in view of Shadman and Nishi, and further in view of Beital, Fang, and Yano, is insupportable and inapplicable to the claimed invention, such that any rejections of Claims 98-196 could not stand. Further, even if Shadman and Nishii were somehow considered applicable, *arguendo*, and somehow capable of combination with Mueller, Beital, Fang, and Yano, *arguendo*, each of Shadman and Nishii, and Beital, Fang and Yano, fails to remedy the deficiencies of Mueller, such that any rejections of Claims 98-196 could not stand. Therefore, an indication that Claims 98-196 are allowable over the alleged combination of Mueller in view of Shadman and Nishii, and further in view of Beital, Fang and Yano, is earnestly solicited.

The Examiner has set forth a number of quotes and statements that he attributes to various sources. (See Office Action, page 4 (see also, remark above regarding *In re Kerkorhoven*), page 5 (see also, remark above regarding *Ex parte George*, *In re Woodruff*, *Merk & Co. v. Biocraft Lab. Inc.*, and *In re Susi*), and pages 6, 7 and 8.) However, the Examiner has not applied any of these quotes and statements to the case at hand, has not provided a context as to any of same, and has not applied any of facts or reasoning that may be associated with any of same to the case at hand, such that application of same to the case at hand, if any, is unclear and not amenable to response. Nothing is conceded in relation to these various quotes, statements, or the sources thereof, or any context or reasoning that may be associated therewith, *arguendo*, and the opportunity to respond to any application of same to the case at hand in the event of any such application is reserved.

CONCLUSION

New Claims 98-196 define novel and non-obvious subject matter of the present invention. Therefore, an early notification that the application is in condition for allowance is earnestly solicited.

Respectfully submitted,



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